

NAVAL POSTGRADUATE SCHOOL

Monterey, California



ON-SITE INSPECTION AS AN
ENHANCEMENT TO VERIFICATION

by

DAVID L. BRAFORD
//

AUGUST 1989

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Prepared for:
Defense Nuclear Agency
NA/NASF
Telegraph Road
Alexandria, Virginia 22310-3398

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REPORT DOCUMENTATION PAGE

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a REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b RESTRICTIVE MARKINGS		
a SECURITY CLASSIFICATION AUTHORITY			3 DISTRIBUTION/AVAILABILITY OF REPORT Approved for public release; distribution unlimited		
b DECLASSIFICATION/DOWNGRADING SCHEDULE			5 MONITORING ORGANIZATION REPORT NUMBER(S)		
PERFORMING ORGANIZATION REPORT NUMBER(S) NPS-56-89-014					
a NAME OF PERFORMING ORGANIZATION NAVAL POSTGRADUATE SCHOOL		6b OFFICE SYMBOL (If applicable) Code 56	7a NAME OF MONITORING ORGANIZATION		
c ADDRESS (City, State, and ZIP Code) MONTEREY, CA 93943-5100			7b ADDRESS (City, State, and ZIP Code)		
3a NAME OF FUNDING/SPONSORING ORGANIZATION Defense Nuclear Agency		8b OFFICE SYMBOL (If applicable) HQ DNA	9 PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER MIPR 88-674		
3c ADDRESS (City, State, and ZIP Code) Defense Nuclear Agency HQ DNA/NASF 5801 Telegraph Rd. Alexandria, Va 22310-3398			10 SOURCE OF FUNDING NUMBERS		
			PROGRAM ELEMENT NO	PROJECT NO	TASK NO
			WORK UNIT ACCESSION NO		
11 TITLE (Include Security Classification) ON-SITE INSPECTION AS AN ENHANCEMENT TO VERIFICATION					
12 PERSONAL AUTHOR(S) DAVID L. BRAFORD					
13a TYPE OF REPORT FINAL		13b TIME COVERED FROM _____ TO _____		14 DATE OF REPORT (Year, Month, Day) 89 AUGUST 01	
15 PAGE COUNT 53					
16 SUPPLEMENTARY NOTATION					
17 COSATI CODES			18 SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP	ARMS CONTROL VERIFICATION		
19 ABSTRACT (Continue on reverse if necessary and identify by block number) This paper rejects the notion that on-site inspection provisions, such as the "historic" terms of the INF Treaty, necessarily insure verification. The principles and processes of verification are examined, as are two failed post-World War I arms control measures that featured intrusive inspection. The Treaty of Versailles was ignored by the Germans, while its replacement, the Anglo-American Naval Treaty, fared no better; both were marked by Allied wishful thinking. A review of post World-War II agreements relative to charges of Soviet noncompliance reveal more ambiguities than actual violations, although the infamous radar near Krasnovarsk fails to be explained away. Discussion of the INF Treaty centers on on-site inspection provisions, provisions that are described as being too costly and too complex to properly implement, as well as offering the Soviet Union unreasonable opportunities for collateral intelligence collection. The author suggests the United States rebuild its counterintelligence assets, attempt to resolve compliance issues through such forums as the Standing Consulting Committee, and form arms control policy in the context of a comprehensive international					
20 DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT <input type="checkbox"/> DTIC USERS			21 ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a NAME OF RESPONSIBLE INDIVIDUAL JAMES J. TRITTEN			22b TELEPHONE (Include Area Code) (408) 646-2521/2429		22c OFFICE SYMBOL Code 56Tr

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE

security policy--one driven only peripherally by the political requirements of the moment.

ON-SITE INSPECTION AS AN ENHANCEMENT TO VERIFICATION

We have never found anything the Soviets successfully concealed.¹

David Braford

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1.0 INTRODUCTION

It is now time for us to separate. Both you and I are glad we are leaving. Your task was unpleasant and so was mine. One thing I should point out. You should not feel that we believed what you told us. Not one word you uttered was true, but you delivered your information in such a way that we were in a position to believe you. I want to thank you for this.²

Secretary of State George Shultz wrote that the Treaty Between the United States and the Soviet Union on the Elimination of Their Intermediate-Range and Shorter-Range Missiles ("INF Treaty") ". . . has the most stringent and comprehensive scheme of verification in the history of arms control".³ Admiral William J. Crowe, Jr., speaking for the Joint Chiefs of Staff, referred to the intrusive on-site inspection provisions of the Treaty as "unprecedented",⁴ while the Washington Post featured a column entitled, "Why the INF Treaty Means the Nuclear Era Is Over".⁵ With the euphoria surrounding the treaty signing, it might appear the United States and the Soviet Union had penned the ultimate arms control measure, and any discussion of issues such as verification would be moot. I suggest, however, that on-site inspection can only represent an enhancement to verification, one that is not inexpensive.

In considering the principles of verification, means of confirming treaty compliance will be considered, as well as possibilities other than on-site inspection. Questionable

activities and noncompliance are mentioned for the first, but certainly not the last, time. In the interest of brevity, the history of verification and non-compliance--with and without on-site inspection--is traced from post-World War I to the present. That period provides two examples of on-site verification: the Treat of Versailles and the Anglo-American Naval Treaty. Germany ignored both and rearmed for the next world war. The post-World War II era is viewed in terms of three major agreements: SALT I (Strategic Arms Limitation Treaty), ABM (Antiballistic Missile Treaty), and SALT II; as with the post-World War I period, noncompliance again is an issue.

In speaking of noncompliance, or deliberate cheating, Soviet activity will be analyzed both through the eyes of those who prepare annual reports to Congress on Soviet non-compliance and those who toil to provide explanations for Soviet misbehavior.

This paper is not concerned with the INF Treaty, although this newest of arms agreements so grandly embraces the principles of intrusive on-site inspection. Rather, the INF Treaty's background, "ratification circus," and specific provisions relative to intrusive inspection are presented. I explain why on-site inspection, all the brouhaha (both East and West) notwithstanding, is really no more than a complement to other forms of verification.

The cost and complexity of implementing the on-site provisions of the Treaty, and the opportunities these terms offer for Soviet collateral intelligence collection by overburdening U.S. counterintelligence assets, serve to question the popular political view of intrusive on-site inspection.

In my concluding remarks I recall the words of Admiral John Godfrey, former Director of British Naval Intelligence, from the discussion on post-World War I compliance to provide guidance for us some sixty years later. First, a verification primer:

2.0 PRINCIPLES OF VERIFICATION

Whatever their form, agreements among nations always stem from a belief by each party that it will benefit. No altruism is involved. Thus all agreements, written or understood, must be verified. No nation can afford to trust another nation in matters affecting its fundamental security.⁶

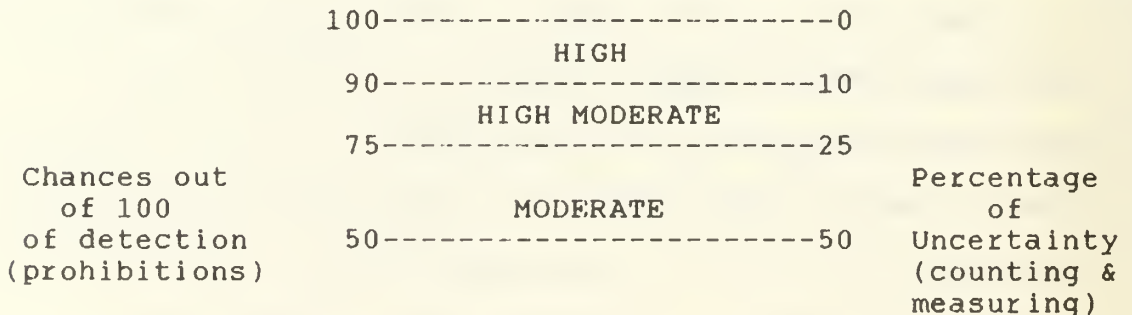
The word "verification", while very popular today, has at least as many different definitions as discussants. I define verification as the means by which one party to an agreement determines whether or not the other party is complying with its terms.⁷ The "classical purposes" of verification are often cited as detection and warning, with the attendant features of deterring violations and confidence-building (in the agreement).⁸ Some charge, however, that the mere mention of verification in discussing arms control serves ". . . as a diversion, a roadblock en route to a treaty. . . ."--especially if doubts about

verifiability are raised.² Detection and warning are the first purposes of verification to be considered.

2.1.1 Detection and Warning

If verification is to serve its classical purpose, it must also be attended by traditional controversies, the most notable being the issue of what exactly should properly be detected. The possibilities range from violations of both the letter and spirit of the agreement, to those that have only military significance; and defining what should be significant to the military always invites debate.

While it would seem best to perceive the earliest possible warning of violations, the verification intelligence process is usually over-burdened, and an excessive number of false alarms will exact a very high political price, along with loss of confidence in the total agreement. Uncertainty also plays a very large role in the arms control process. Figure 1, an arms control classic, illustrates how, as the likelihood of detection decreases, the percentage of uncertainty and lack of confidence increases:



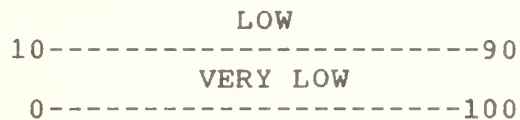


Figure 1. Ranges of monitoring and detection confidence. Data from U.S. Congress, Senate Committee on Foreign Relations, The Salt II Treaty, Hearings, 96th Cong., 1st Sess., July 16-19, 1979, or 2 (Washington, D.C.: GPO, 1979), p. 241; quoted in William F. Rowell, Arms Control Verification: A Guide to Policy Issues for the 1980s (Cambridge, Massachusetts: Ballinger, 1986), 17; and Michael Krepton, Arms Control: Verification and Compliance (New York: Foreign Policy Association, 1984), 6.

It should be observed that the projection of risks and benefits associated with noncompliance, and the estimation of the likelihood of detection, both depend upon the analyst's point of view.

2.1.2 Deterrence

The attitude persists that verification serves somewhat as a deterrence, although ". . .deterrence depends upon the Soviet perception of U.S. capabilities to detect and political will to respond to suspected Soviet violations. . .¹⁰ However, judging from the rarely changing annual list of alleged Soviet violations, this view could easily be impeached.

2.2.3 Confidence Building

Milutin Civićin the Review of International Affairs (founded by the Socialist Alliance of Working People of Yugoslavia), wrote, ". . .adequate verification can also become a factor in confidence building, an instrument in expanding cooperation in disarmament. . ."¹¹ Just as

verification can build confidence, real or alleged violations of an agreement can adversely affect the possibilities for future treaties--even if the perceived activity has little effect on national security.¹²

2.2.1 The Verification Process

The verification process begins with the preparations for arms control negotiation and continues for the life of the agreement. There are four basic ways to verify a treaty:

(1) National technical means (NTM), such as satellite surveillance, radar surveillance from locations outside the borders of the countries monitored, radioactive air sampling, teleseismic geophysical observations, and communications intercepts; (2) cooperative means of verification, such as the deliberate opening of certain features of military systems to surveillance, specific channeling of military products through agreed check-points, and noninterference with the means of verification; (3) on-site inspection; and (4) "soft" methods of verification, such as using agents, interviewing émigrés, and analyzing information leaks.¹³

Before INF, on-site inspection provisions generally were not negotiable with the Soviet Union, and ". . .the limits of NTM set the outer boundaries of potential arms control agreements.¹⁴ While on-site inspection might appear the most error-free and thus uniquely desirable way to verify arms control treaties, the right to inspection is valueless without effective satellite surveillance, which identifies where on-site inspections should best be directed.¹⁵

Any discussion of verification must note that often the most difficult arms control negotiations do not necessarily involve the gentlemen from Moscow, but, rather, those in our

own government bureaucracies.¹⁶ The process, however, is said to build a broad consensus.¹⁷ Aware of both difficulties and bureaucracies, we inspect the role of Congress.

2.2.2 Congressional Approval

All arms control accords must be approved by the Congress. Article II, Section 2 of the Constitution requires the advice and consent of the Senate by a two-thirds vote. The 1961 Arms Control and Disarmament Act requires all agreements that disarm or serve to reduce U.S. armed forces or armaments to be handled either as treaties or by "further affirmative legislation". SALT I was approved by a joint resolution of Congress. Exactly how a proposed agreement is to be processed is based upon informal agreement between the executive branch and the Congress.¹⁸

2.2.3 Monitoring

The distinction between monitoring and verification should be clear. Monitoring is a technical activity concerned with establishing (more or less) objective facts, while verification is an interpretative activity.¹⁹ Monitoring employs the constant technical assets of collecting, analyzing and reporting. It is a continuing process, and is not designed solely to detect violations. As noted, intelligence systems are often taxed, and it is necessary to rank significant targets for collection.²⁰

The raw data is processed so analysts can effectively use the information, while relying on a spectrum of sources, and their knowledge of Soviet behavior patterns, for evaluation. Important as they are, the analysts must pass their estimates to the policymakers for decision.

2.2.4 Questionable Activities: Policy Decisions and Resolution

There are options available to the national leadership concerning measures that may be taken against possible arms control treaty violators: stop the offender and undo the gains of his cheating; field a countervailing capability; or find virtue in the new status quo.²¹ Other possible resolutions of the violation could include an acceptable explanation of the activity, and agreement to: stop the activity; prevent such activity in the future, and discuss the particular issue in continuing or future negotiations.²² The last, least desirable option for the chief executive would be to abrogate the entire document--politically palatable only if there was irrefutable evidence of a blatant breach.

Sanctions will take up little space here. While, in theory, sanctions may range from public disclosure (however ambiguous) to treaty abrogation, the United States has had "no experience in levying sanctions (beyond public announcement)"²³ concerning Soviet violations. We recall from former arms agreements that on-site inspections, violations, and the deplorable lack of viable sanctions have gone hand-in-hand

before.

3.0 BACK TO THE FUTURE: ARMS CONTROL VERIFICATION, AND NONCOMPLIANCE

Looking in the past to illuminate the present is hard and risky. We can be more objective about the past and both wonder and laugh over obvious stupidities and errors--especially if committed by strangers, long ago and far away--but we cannot take our potential or imminent mistakes or foolishnesses lightly.²⁴

Tracing our "great leap backward," we will begin with the nonenforced provisions of the Treaty of Versailles, including terms for on-site inspection. Next, we view the nonenforcement of the Anglo-American Naval Treaty. Moving to the post-World War II era, ". . .the three agreements that have played the most important regulatory function in the Soviet-American strategic relationship. . ." ²⁵ will be examined for verification processes and lack of compliance.

3.1 Post-World War I Disarmament Verification Efforts

Following World War I, the Allies established the Inter-Allied Control Commission to supervise the disarmament provisions of the Treaty of Versailles. Unfortunately, this early exercise in on-site inspection was undermined both by the failure of the Allies to maintain a common purpose and the concerted efforts of the German government to secretly rearm. It was not uncommon for inspectors to be physically attacked, with visits discouraged by the hosts announcing that they could not guarantee the safety of inspectors. In 1923 the Germans refused to provide liaison personnel for

French inspectors and inspections were hampered even more. In 1926 the Inter-Allied Control Commission was replaced by a conference of ambassadors,²⁶ with the Commission's final report raising questions regarding Germany's good intentions:

Germany has never disarmed, has never had the intention of disarming, and for seven years has done everything in her power to deceive and "counter-control" the Commission appointed to control her disarmament.²⁷

The Allies regarded the report as an inconvenience, with the document being largely suppressed.²⁸ Verification of an agreement that followed the Treaty of Versailles fared no better.

In Room 39: A Study in Naval Intelligence, author Donald McLachlan describes the Anglo-American Naval Treaty as providing a case study of ". . .the distortion of intelligence by politics."²⁹ As Adolph Hitler would not abide by the provisions of the Treaty of Versailles, the British promptly wrote the Naval Treaty, for him also to ignore. McLachlan observes, "Wishful thinking, that ever lurking temptation for politicians dealing with military affairs--and for serving officers involved in politics--is even more conspicuous in this episode than that of the U-boat sinkings."³⁰ Admiral John Godfrey, Director of British Naval Intelligence, noted the following caveats from the episode:

1. The unwillingness of authority to believe information that has awkward political implications.
2. The tendency of naval officers, and others who have taken part in negotiations, to become advocates of the integrity of the persons with whom they secured agreement, and to lose the skepticism which is part of vigilance.

3. Our technicians may not be the best judges of enemy intentions and achievement. They find it hard sometimes to believe that what they cannot do or have not thought of doing has been done by the other side.³¹

3.2 Post-World War II Arms Control Measures

The Baruch Plan of 1946 was the first attempt to control nuclear arms, an effort by the United States which was rejected by the Soviets; in 1954-1955, under the aegis of the United Nations, disarmament measures were traded, but tense relations between the two nations precluded agreements.³² U.S. proposals for "open skies" (inspection by NTM, on-site inspection, and exchanges of military information) in 1955 were rejected as only further attempts to spy on the Soviet Union--and also because of both Soviet fondness for secrecy and intentions to redress the existing military unbalance.³³ With the approach of parity,³⁴ several limited agreements were reached over the next ten years: the Antarctica Treaty (1959), Washington-Moscow Hot Line (1963), Outer Space Treaty (1963), Nonproliferation Treaty (1968), Seabed Treaty (1972), Accidental War Agreement (1971) and the Biological Warfare Convention (1972).³⁵

It should be noted, however, that until Mikhail Gorbachev took office, in all postwar negotiations the United States called for intrusive inspections, while the Soviets maintained that such visits would be nothing more than intelligence gathering expeditions.³⁶

3.2.1 SALT I, ABM, and SALT II

In the late 1960s, U.S. officials in a series of public statements suggested that the United States and the Soviet Union begin talks regarding the control of strategic weapons; however, the Soviet "liberation" of Czechoslovakia in 1968 delayed talks until 1969.³⁷ While there were many controversies regarding the terms of the agreement (the numbers of weapons were far from symmetrical, the defense responsibilities of the countries differed, and each country had its unique definition of "strategic"), President Nixon and General Secretary Brezhnev signed the ABM Treaty and the Interim Agreement on strategic offensive arms (SALT I) in 1972. Verification of the treaty was to be accomplished by NTM, both sides agreeing not to interfere with the other's verification efforts.

By treaty, the parties were prohibited from deploying ABM systems, except at one site which would contain no more than one hundred missiles. By interim agreement, the United States and the Soviet Union were limited for five years to the number of offensive strategic missiles under construction, or deployed, at the time the treaty was signed; each country was free to substitute new weapons for old, and there was no limit on long-range bombers.³⁸

Following the Interim Agreement of Strategic Offensive Arms, signed in May 1972, the following November SALT II negotiations began. Newly elected President Jimmy Carter

attempted to apply his "open diplomacy" and dramatically change the levels previously agreed to at Vladivostok in 1974, but was rebuffed by the Soviets. Finally, under the framework of the Vladivostok Accord, a settlement was reached on SALT II and signed by Presidents Carter and Brezhnev in June 1979.³⁹ SALT II provided:

BY TREATY (which expired at the end of 1985):

The United States and Soviet Union are limited to an aggregate of 2,400 strategic launch vehicles each (ICBMs, SLBMs, and heavy bombers) until the end of 1981. From then until the treaty expires, they are limited to an aggregate of 2,250 each.

Until the treaty expires, the two superpowers are limited by three sublimits within these overall ceilings. They may not deploy more than 820 launchers of MIRVed ICBMs; not more than 1,200 launchers of MIRVed ICBMs and MIRVed SLBMs; and not more than 1,320 launchers of these MIRVed missiles and heavy bombers equipped with long-range cruise missiles.

BY PROTOCOL (which expired at the end of 1981):

During the protocol period the superpowers are barred from testing or deploying mobile ICBMs, and they are barred from deploying cruise missiles with ranges longer than 600 kilometers (about 325 miles).⁴⁰

In 1979, however, the Soviet invasion of Afghanistan and the discovery of Cuban proxies fighting in Angola raised questions regarding Soviet intentions. In 1980, President Carter withdrew the treaty from Senate consideration. Some observers cited Soviet aggression in Afghanistan as the reason,⁴¹ while others said that the treaty was pulled back even before the Soviet action, because of serious Senate opposition to the agreement.⁴²

3.2.2 Soviet Violations Under SALT I, ABM, and SALT II

A summary of the President's Reports to Congress on Soviet noncompliance (see Table 1) lists one violation under SALT I, one violation under ABM, and five alleged violations under SALT II. Spread amongst the "violations" we find "probable violations," "almost certainly violations," "potential violations," "probably has violateds," "may be preparing," [to violate] and "ambiguous situations." While the table summarizes reports only through March 1987, all that is required to update it to December 1987 is to add an additional violation under ABM--the Soviets were charged with deploying ABM radar components at Gomel.⁴³ The small changes in the claimed violations from year to year could be the result either of Soviet intransigence or lackluster imagination by administration analysts. The promised table:

TABLE 1

PRESIDENT'S REPORTS TO CONGRESS ON SOVIET NONCOMPLIANCE

<u>ISSUES</u>	<u>TREATY</u>	<u>JAN 1984 REPORT</u>	<u>FEB 1985 REPORT</u>	<u>DEC 1985 REPORT</u>	<u>MAR 1987 REPORT</u>
1. Impeding Verification by encryption of missile test telemetry	SALT II	Violation	Violation	Violation	SALT I and SALT II deleted--U.S. no longer bound by these limits
2. SS-25 as a violation of the one new type ICBM provision	SALT II	Probable violaton	Violation	Violation	

3. Ban against SS-16 testing, production, and deployment	SALT II	Probable violation	Probable violation	Probable removal of SS-16 equipment	
4. Strategic nuclear delivery vehicles exceed the 2,504 cap	SALT II	-----	-----	Violation	
5. Impeding verification by concealing the association between an ICBM and its launcher	SALT II	-----	-----	Violation	
6. Use of dismantled SS-7 sites for support of SS-25	SALT I	-----	No Violation	Violation	
7. Reconfiguration of one Yankee SSBN for use as a cruise missile carrier	SALT I	-----	No Violation	-----	
8. Krasnoyarsk radar	ABM	Almost certainly a violation	Violation	Violation	Violation
9. Development of mobile ABM, violation system of components	ABM	-----	Potential violation	Potential violation	Potential violation
10. Concurrent testing of ABM and SAM components	ABM	-----	Probably has violated	Probably has violated	Probably has violated
11. Aggregate ABM activities provide base for territorial defense	ABM	-----	May be preparing	May be preparing	May be preparing
12. Tested a SAM system or component as an ABM	ABM	-----	-----	----Insufficient---- to assess	
13. Rapid reload of ABM launchers	ABM	-----	-----	Ambiguous situation	Ambiguous situation

In ignoring the potential, probable, maybe, insufficient and ambiguous allegations, each of the listed charges of Soviet noncompliance will be considered, beginning with the "most blatant and serious,"⁴⁴ the infamous Krasnoyarsk radar.

3.2.1.1 The Krasnoyarsk Radar

According to the U.S. Department of State, the large, phased-array radar should be used only for space-tracking and NTM verification, under the provisions of the ABM Treaty--not for its identified purpose of ballistic missile detection. It is claimed that the radar has not only the ability to detect and track ballistic missiles, but also to contribute to ABM battle management.⁴⁵

Even the strongest supporters of the Soviet compliance record acknowledge, although grudgingly, that the radar under construction violates the ABM Treaty: in a one-page article in Arms Control Today discussing the radar, this acknowledgment only comes in the second half of the story;⁴⁶ while admitting concerns over construction of the radar, the Center for Defense Information maintains that the only way really to know if it serves an early warning function is to wait until it is operating.⁴⁷ One author describes the site as violating only the "intention" of the ABM Treaty.⁴⁸ Of all the yes-but or (perhaps) guilty with explanation accessions, Gary Guertner's are perhaps the most thorough, and he will represent the Red Team regarding the radar issue as well as

the five other alleged violations. First, here are the basics, from Guertner.

Soviet noncompliance can be measured by three competing images: the military significance of deliberate cheating, Soviet bureaucratic culture, and conflicting interpretations of treaty obligations. On the first score, it is claimed that the radar is significant only in territorial defense, and thus does not affect the strategic balance nor contribute to a breakout (of the ABM Treaty) potential. Still, viewing the radar issue from the military significance perspective, it is agreed, however, that it might just undermine predictability. Its obvious illegal positioning was dictated by logistical and geographical problems of construction (the Soviet bureaucratic culture in play), and regarding conflicting interpretations of the treaty obligations, the best that can be suggested is that the Soviets are victims of implied guilt.⁴⁹ (One source does indicate that the Soviets had tried earlier to erect two radars close to the northern border, but gave up because of the construction difficulties in permafrost conditions.⁵⁰

It appeared, for a time, that the Krasnoyarsk radar issue might be resolved in mid-1988, when the 20 July 1988 issue of Pravda stated that the Soviet Union would ". . . be prepared to dismantle the equipment of the Krasnoyarsk radar station in a manner that would lend itself to verification. . . ."⁵¹ In August it was announced by the White House that

President Reagan had "put off" a decision on whether the radar represented a material breach of the treaty;⁵² yet, in October the President stated that the radar site was a "significant violation".⁵³ The Soviets continued their public offers to resolve the matter, admitting in December 1988 that Soviet scientists were competing with each other to find a scientific use for the radar.⁵⁴

3.3.1.2 Use of Dismantled SS-7 Sites

In addressing the last charged violation under SALT I and ABM--using remaining facilities at former SS-7 sites--apologists explain that the intent of the provisions was to prevent the timely reactivation of old launch sites. The Soviets assert that usage of the old SS-7 locations is permitted because SALT I terms do not apply to mobile missiles, and the facilities are not use to store, support or launch ICBMs. To use the language of imagery, this controversy is attributed to conflicting interpretations of terminology (the definition of "facility") and treaty obligations and issues (provision does not apply to mobile ICBMs).⁵⁵ Gloria Duffy reminds us that SS-7s were silo-launched, and the sites in question would offer little to the mobile SS-25s--this is a matter of mere "technical concern".⁵⁶

3.3.1.3 Impeding Verification By Encryption

Article XV (3) of the SALT II Treaty prohibits "deliberate concealment measures which impede verification."⁵⁷ The

ambiguous terminology apparently drove the Soviets to over-encrypt. It is argued that the Soviet Union has a tradition of secrecy, that complex encryption is standard on all test missiles, and, anyway, there are many other ways to gather data.⁵⁹ One way suggested that while the U.S. complained about the encryption, it apparently was able to gain enough information from the test telemetry to charge that the SS-25 was a second "new-type" ICBM.⁶⁰ Others aver that the Soviets offered to modify their procedures in 1983 if the United States would specify the types of telemetry information it required to verify compliance.⁶¹ As perhaps anticipated by the Soviet Union, the U.S. refused, stating that to accept the Soviet offer would mean revealing its interception capabilities.⁶¹

3.2.1.4 SS-25 As A Second Type ICBM

SALT II allowed the United States and the Soviet Union to develop and deploy one new type of ICBM. This missile was defined as being different (greater than five per cent increase or decrease) in any of one or more of (a) the number of stages, the length, the largest diameter, the launch-weight, or the throw-weight of the missile, or, (b) the type of propellant of any of its stages. The Treaty also called for the parties not to test or deploy ICBMs with a single re-entry vehicle (RV) with a weight of less than fifty per cent of the throw-weight of the ICBM.⁶² The U.S. alleged that the SS-25 is a second new type of ICBM, in that the weight of the

RV is less than required, potential verification data on the missile has been encrypted, the relationship between the SS-25 and its launcher has been disguised, and former SS-7 sites now support the SS-25.⁶³ This is all explained away by apologists saying that such Soviet behavior is understandable, considering their ". . . loose constructionalist approach to complex treaty language," and suggesting that the SS-25 does fall within SALT's "compliant boundaries"⁶⁴--apparently here defined as those that apply to oneself.

Secretary of State George Shultz left the issue obscure when he reportedly told a "This Week With David Brinkley" audience in 1985 that, "There are questions about whether in a purely technical sense, the SS-25 fits within the treaty language as might be interpreted by a lawyer."⁶⁵

3.2.1.5 Exceeding The Strategic Nuclear Delivery Vehicle Limits

While the Reagan administration charged that the Soviets had exceeded the cap of 2,504 total vehicles, a controversy over the actual number arose, with the Joint Chiefs of Staff listing 2,477 vehicles at the time. The United States did not accept the argument that certain Soviet bombers converted to tankers accounted for the difference, saying that dismantlement procedures had not been established. The U.S. refused to discuss such procedures in the Standing Consultative Commission (SCC), the forum established by SALT I to arbitrate such disputes. It was argued

that had the issue been discussed by the U.S., it would lend legitimacy to a treaty the United States no longer considered valid.⁶⁶

Gary Guertner asserts that if the drafted bomber-to-tanker conversion procedures had been signed, then the Soviet levels would have dropped to fourteen below the permitted limit.⁶⁷ He mentioned that the issue had no significant impact on the strategic balance, did not undermine predictability, and could be explained away by recalling that no final agreement was reached on bomber-to-tanker conversions.⁶⁸

3.2.1.6 Launcher and ICBM Association

Article XV, First Common Understanding, of SALT II calls for the Soviet Union and the United States not to impede verification by disguising the association between launchers and their ICBMs during testing. By making the association, it is possible to establish whether a launcher should be counted as a MIRVed (multiple independently targetable reentry vehicle) or non-MIRVed launcher and whether it falls within SALT II parameters.⁶⁹

While the Director of the U.S. Arms Control and Disarmament Agency likens this example of alleged Soviet deception to the Potemkin village,⁷⁰ it is dismissed by others who note that placing netting over the launchers was possibly the work of overzealous Soviet bureaucrats using poor testing standard operating procedures.⁷¹

In reviewing the history of Soviet noncompliance, two observations come to mind: first, NTM could use some help, and second, while it appears that on-site inspection represents easy verification, the example of Germany disarming/rearming illustrates that, regardless of provisions of the treaty or agreement, and of the means of verification, if both parties do not devoutly wish the pact to succeed, it will surely fail.

4.0 THE INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY

They're just coming to snoop and then they're going to go back home and bomb us.⁷²

In his last news conference, President Reagan once again quoted his favorite Russian phrase: doveriai, no proveryai--trust, but verify, referring to the extensive on-site inspection verification procedures in the INF Treaty.⁷³ We shall examine the background of the treaty that showcases the latest in on-site inspections, including what John Issacs referred to as the "ratification circus."⁷⁴ The specific terms of the agreement will be reviewed, as well.

4.1 Background of the INF Treaty

The INF Treaty is explained by some as derived from two concerns of western Europe: first, the deployment of Soviet SS-20 mobile missiles, targeted on western Europe; and second, the apparent preoccupation of the United States with SALT II, which copes with the issues of nuclear weapons aimed at the U.S., not western Europe. After some discussion, in

1979 NATO (North Atlantic Treaty Organization) decided to modernize by deploying the Pershing II and GLCMs (ground launched cruise missiles) as it simultaneously began talks to reduce the SS-20 menace. The Soviet Union began an intense worldwide public relations disinformation campaign (we currently see an intensified propaganda program, Gorbachev's "new thinking" notwithstanding)⁷⁵ against the deployments, arguing that parity existed in Europe--if French and British nuclear assets and the forward-based aircraft of the United States were included in the mix. While they called for a freeze on INF deployments, the Soviets made no offer to reduce their numerical advantage.⁷⁶

In 1983 the NATO missiles were deployed, and the Soviet Union ended talks on the INF Treaty. In 1985, however, INF negotiations were resumed, and over the next two years the Soviets agreed on terms that did not include covering aircraft, excluded French and British nuclear assets, banned INF missiles in Asia, and required intrusive on-site inspections.⁷⁷ The negotiations notwithstanding, at the time some western defense experts asserted that the intermediate-range Pershing IIs in West Germany were important as a symbol of the United State's commitment to defend western Europe.⁷⁸

Reflecting both a growing interest and increasing concern regarding arms control, a 1987 report by the House Permanent Select Committee on Intelligence, entitled Intelligence Support to Arms Control, listed verification as ". .

.one of its most critical components." A summary of the findings included the following observations:

- (1) The...SCC...has been under-utilized...
- (2) There has been a lack of analysis on the military significance of compliance behavior...
- (3) Competitive interagency analysis within U.S. intelligence on...Soviet arms control compliance has been neglected...
-
- (13) The U.S. retains strong confidence in its ability to monitor quantitative limits on Soviet strategic missiles...
- (14) There has been inconsistent application of monitoring judgments concerning U.S. proposals at the Nuclear and Space Arms Talks on...mobile ICBMs, ground-launched cruise missiles and non-deployed missiles..
- (15) The Challenger and Titan II disasters caused scheduling disruptions, but U.S. intelligence has been able to maintain effective monitoring capabilities for arms control.
- (16) The executive branch has failed over the years to develop a comprehensive architecture for directing, prioritizing and properly funding research and development of new technologies for arms control monitoring...
-79

The Committee recommended that: executive branch use the SCC more effectively, the JCS should assess the strategic military significance of compliance issues, the lessons about ambiguous treaty provisions be noted and future agreements be more precisely written, and "On site-inspection regimes should not be considered as substitutes in all cases for the technological limits of national technical means."⁸⁰ On 8 December 1987 the treaty was signed by the leaders of the United States and the Soviet Union.

The Christian Science Monitor suggests that the INF Treaty reflects ". . .either extraordinary readiness to com-

promise on the part of the Soviets or extraordinary skill and tenacity on the part of American negotiators."¹ Eight areas of conflict between the two signatories are listed: the very act of entering negotiations, INF linked to SDI (Strategic Defense Initiative), equal warheads, British and French missiles exempt, INF-range aircraft exempt, destruction of all INF missiles, on-site inspection, and the 1972 West German Pershing IA missiles exempt. The score, as kept by author Elizabeth Pond, shows the Soviets conceding on all eight points, and the United States giving in on four.² Soviet Minister of Foreign Affairs E. A. Shevardnadze took exception to claims that the Soviets had suffered at the bargaining table, saying in Pravda, "Simple justice directs that they admit concessions that they made in response."³

While not wholly accepting that the pact was signed in the interests of world peace and international brotherhood, it is noted that politicians Ronald Reagan and Mikhail Gorbachev both needed the agreement: Reagan to preserve his place in history and Gorbachev to keep his position in Moscow. It has also been suggested that, with growing economic problems in the Soviet Union, compounded by the cost of cleaning up Chernobyl (eight to ten billion dollars),⁴ eliminating whole categories of weapons would represent a real savings and help Gorbachev to at least provide a taste of butter to his constituents. Whatever the actions of the two superpower leaders, the treaty faced ratification by the U.S.

Senate.

4.2 The Ratification Circus

The INF Treaty was often described as having widespread political support,²⁵ ". . .headed for its required approval by two-thirds of the Senate."²⁶ At the time, a number of factors were listed for these positive circumstances:

...strong approval by the American public, a broad, bipartisan sector of Congress and major U.S. allies; energetic support by a hawkish president; and dramatic breakthroughs in the details of the agreement, such as elaborate provisions for U.S. officials to inspect Soviet missile facilities.²⁷

This is not to say there was no debate; conservative members of the Senate charged that the document was flawed in both its implied assumption that the Soviet Union could be trusted to comply with any agreement, as well as being defective in specific provisions.²⁸ Republican Senator Jessie Helms led most of the assaults, alleging, among other things, that while the Soviets might well be scrapping more missiles, this supplied them with more warheads to put on new missiles not covered by the pact.²⁹ Helms also charged that the Soviets could substitute SS-25s for the banned SS-20s³⁰ and that the Soviet Union was concealing between 165 and 300 of the SS-20s.³¹ Questions were also raised as to why provisions for anywhere, anytime inspections were not in the treaty as submitted, when some government officials had earlier demanded the provisions.³²

Max M. Kapelman, chief negotiator for the United States, responded to the issues raised by Helms and others by stating that the explosive packet removed from the missiles would not be a functioning warhead, since the reentry vehicle would have been destroyed under the provisions of the treaty.⁹³ In answering questions concerning the substitution of SS-25s for SS-20s, INF negotiator Maynard Glitman explained that while the intercontinental SS-25s could threaten both the United States and Europe, they did not present the specific, perceived danger to the Europeans that the SS-20s did.⁹⁴ In discussing fears of a Soviet stockpile of hidden SS-20s, Secretary of Defense Frank Carlucci asserted that U.S. intelligence services had been uniform in their estimates of the number of SS-20s, even though Helms had complained that the DIA (Defense Intelligence Agency) had estimated a higher number of the missiles than listed by the Soviets. One possible explanation for Carlucci's apparent unconcern was his feeling that even if there was a phantom force of SS-20s, such a stockpile could not be tested without detection, which would cause it to lose its military utility.⁹⁵ The last of the complaints, concerning the anywhere, anytime inspections, was answered by Glickman, who stated that the administration, backed by the Pentagon, decided that the price would be too high to allow Soviet inspectors to visit the most sensitive facilities in the United States, even though such trips would be reciprocal.⁹⁶ It was later

alleged by one source that strategic planners at the State and Defense Departments had been too concerned with possible benefits they might receive by visiting Soviet sites to realize the severe impact such inspections would have on the U.S. defense industry. Senior NSC [National Security Council] officials were said to have been the first to recognize the problem.⁹⁷

As Senate testimony continued, Admiral Crowe was quoted by the Committee on Foreign Relations as having said:

Suffice it to say, our discovery of cheating would run counter to everything General Secretary Gorbachev is trying to do in his public diplomacy, e.g., improve the Soviet image; revitalize the Soviet economy in cooperation with the West; and achieve more openness and candor in Soviet society. In this broader political context, cheating on the INF Treaty would be very risky business and involve extremely high stakes.⁹⁸

The report states that the Committee found Admiral Crowe's arguments "very persuasive."⁹⁹

Even as Pravda fretted that ". . .on the United State's side of the ocean disarmament has many powerful opponents. Their names and addresses are well known. . .",¹⁰⁰ on 27 May 1988 the Senate voted 93-5 to ratify the INF Treaty. In political terms, the agreement was described as offering something for everyone: it gave President Reagan a major arms agreement for the history books, provided the Republicans an election-year defense vote and allowed them to claim that "peace through strength" really does work, and allowed Democrats of the arms control persuasion an opportunity to claim a victory against hardliner President Reagan.¹⁰¹ And

now for the arms control provisions that gave so much to so many. . . .

4.3 INF Treaty Provisions

The INF Treaty requires the United States and the Soviet Union to eliminate all ground-launched intermediate-range missiles (IRMs, with a range of 1,000 to 5,500 kilometers), shorter-range missiles (SRMs, with a range of 500 to 1,100 kilometers), associated launchers, equipment, support facilities, and worldwide operating bases. INF also bans flight-testing and production, as well as launcher production.¹⁰² Table 2 lists the deployed missiles to be destroyed under the INF Treaty:

TABLE 2

DEPLOYED MISSILES TO BE DESTROYED
(INTERMEDIATE-RANGE AND SHORTER-RANGE)

U.S.			U.S.S.R.		
TYPE	NUMBER	WARHEADS	TYPE	NUMBER	WARHEADS
Pershing II	120	120	SS-20	405	1,215
GLCMs	309	309	SS-4	65	65
			SS-12	220	220
			SS-23	167	167
Total:	429	429	Total:	857	1,667

Source: "After the INF Treaty: U.S. Nuclear Buildup In Europe," The Defense Monitor, Vol. XVII, No. 2, 1988, 2.

The Treaty is comprised of seventeen Articles, along with a Memorandum of Understanding (MOU) that details definitions, total numbers of missiles and launchers, missile

deployment areas, missile operating bases and locations for both deployed and nondeployed missiles. The Treaty is supplemented by an inspection protocol and an elimination protocol.¹⁰³ All facilities listed in the treaty, except for missile production plants, are subject to some form of on-site inspection for thirteen years. The on-site inspections are expected to fulfill five distinct functions, according to Arms Control Today.¹⁰⁴

The initial function [Article XI, paragraph 3] was to establish a baseline inventory, by inspections at the operating bases and support facilities listed in the MOU, but not including missile production sites. Elimination facilities were also to be inspected to verify the number of units to be destroyed. When this phase ended, a total of 146 inspections had been made--115 visits to Soviet locations and 31 at sites in the U.S.

A second purpose [Article XI, paragraphs 7 and 8] of the intrusive inspections is to observe the actual destruction of the other party's equipment at the elimination centers, with destruction scheduled to take place over a three year period.

After a support facility or missile operating base has been eliminated, the agreement calls for a close-out inspection within sixty days to verify the removal and destruction of both missiles and support equipment [Article XI, paragraph 5 (b)1].

The fourth function [Article XI, paragraph 6 (a) or (b)] of the on-site inspections is to monitor portals of missile production facilities. Over the next thirteen years the United States may place up to thirty resident inspectors, twenty-four hours a day, around the perimeter of the Votkinsk Machine Building Plant, where the SS-20 IRM and the non-treaty SS-25 ICBM are assembled (along with usually nonlethal Soviet washing machines). Because of the similarity of missile stages between the SS-20 and SS-25, U.S. inspectors are confirming that SS-20 production has actually ceased. Soviet inspectors are at the Hercules Plant at Magna, Utah, where boosters for the Pershing were once made; boosters for both the MX and Trident ICBMs are still in production at the Hercules site.

The final function of on-site inspections under INF is to conduct short-notice inspections, where the parties are allowed up to twenty inspections per year in the first three years of the treaty.¹⁰⁵ Figure 2 diagrams the "verification of [the] INF deal".

5.0 ON-SITE INSPECTION: ONLY AN ENHANCEMENT?

President Reagan: We have listened to the wisdom in an old Russian maxim. And I'm sure you're familiar with it, Mr. General Secretary, though my pronunciation may give you difficulty. The maxim is: doveryai, no proveryai--trust, but verify.

General Secretary Gorbachev:— You repeat that at every meeting.

President Reagan: I like to.¹⁰⁶

Even a casual review of the commentary generated by

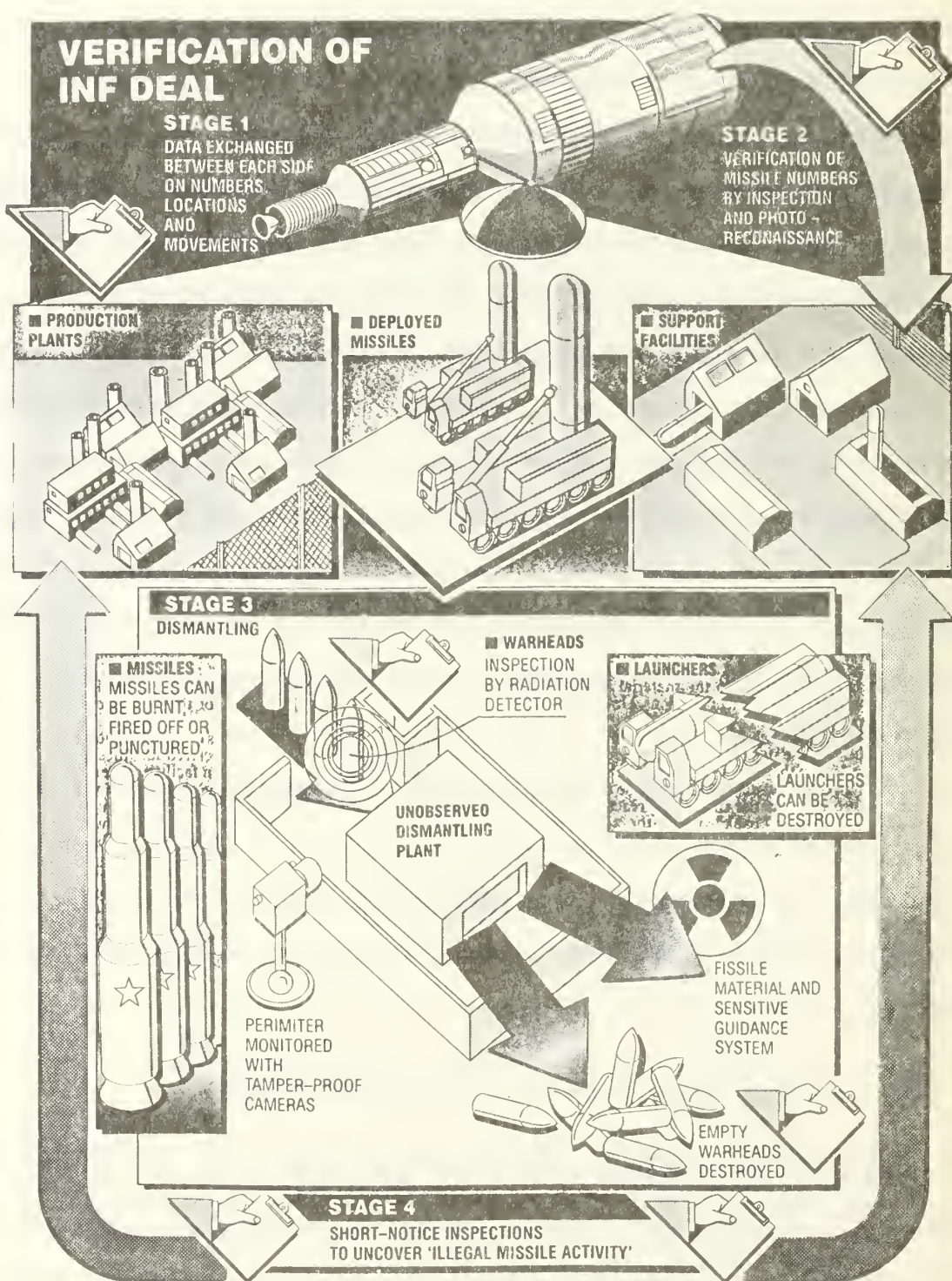


Figure 2. Verification of the INF Deal. From Jerry Leggett and Patricia Lewis, "Lifting The Lid On The Arms Treaty," *New Scientist*, 19 November 1987, 49.

the INF Treaty reveals several recurrent themes that raise questions about the widespread perception that on-site inspections represent some sort of panacea for arms control. The cost and complexity of on-site inspections, the opportunities for Soviet intelligence collection presented by intrusive on-site inspection, and the revelation that verification is often in the eyes of its beholder, anyway, are concerns which deserve discussion.

5.1 The Cost and Complexity Of On-Site Inspection

It was estimated that it would cost between one hundred and eighty and two hundred million dollars in 1988 alone to pay for dismantling missiles and establishing monitoring sites for the INF agreement. While lower expenditures are expected later due to lower force levels, requirements now demand ". . .substantial additions to the defense budget."¹⁰⁷ In looking back once more, when the Great Powers agreed to reduce the numbers of battleships and aircraft carriers in 1920, they simply spent the money improving and building more cruisers, submarines, and other unrestricted weapons.¹⁰⁸

It had been projected early that the On-Site Inspection Agency (OSIA) would employ some four hundred or more persons to handle both U.S. and Soviet inspections,¹⁰⁹ but Brigadier General Roland Lajoie, director of OSIA, stated that there were currently almost one hundred inspectors in the Soviet Union, with approximately thirty at Votkinsk alone.¹¹⁰

The very mechanisms designed to build confidence in the INF Treaty have been described as possibly causing problems that in reality ". . . could create irritation and suspicion. . . ."¹¹¹ because of their complexity. As an example, the Nuclear Risk Reduction Centers have been tasked with managing the exchange of data bases, along with arranging the inspections. These new responsibilities are much more detailed and complex than those in the Center's original mission.¹¹² The very establishment of (yet) another agency, competing for funds with existing bureaucracies, is expected to cause a modicum of disruption, with even more interagency competition and Congressional infighting anticipated.¹¹³

5.2 Soviet Collateral Intelligence Collection

Probably the most sensationalized concern regarding the on-site inspection provisions of the INF Treaty is (or was) collateral intelligence gathering by the sanctioned Soviet inspectors. Popular domestic newspapers and newsmagazines outdid the tabloids with such articles as "Hunting For Hidden Missiles,"¹¹⁴ "Getting Ready For Soviet Spies,"¹¹⁵ "The Glasnost Factor Is Spooking The Spooks,"¹¹⁶ and "Soviets In High-Tech Wonderland: More To See Than Rockets,"¹¹⁷ In "Eye-ball To Eyeball," it is stated there are sixty-three defense firms within a thirty-one mile radius of the inspected Hercules facility in Utah, a plant that still makes the MX missile, small ICBM, and Trident II, as well as developing the Delta II and Titan IV rockets.¹¹⁸ The same neighborhood

includes the Redstone Arsenal, which is not only a missile base but also home for a research and development center for nuclear battlefield weapons, production and launch plants for the National Aeronautics and Space Administration (NASA), and a facility for replicating and testing of classified non-U.S. weapons.¹¹⁹

Senator Orrin Hatch, through his legislative assistant Robert Lockwood, expressed concern that Soviet inspectors could use inexpensive FM radios to obtain testing information on systems not covered by the INF Treaty; it was also suggested that Soviets could listen in on the cellular carphone conversations of nearby defense engineers and executives.¹²⁰ With a bit less verve but no less concern, Aviation Week & Space Technology expressed the trepidations of the soon-to-be inspected U.S. defense contractors in late 1987.^{121, 122}

Responding to NSC observations regarding "profound implications" for both the industry and government from on-site inspections, contractors stated that they would have to shut down production lines when inspected; there was concern that the Soviet visitors could identify workers at specific (non-INF related) work stations and target them for later contact by espionage assets. It was also noted that contractors sometimes mix production lines of both military and commercial contracts at the same location, and it feared that disruptions from the inspections could affect deliveries of non-INF materials.¹²³

While these concerns were being raised, questions were also asked about the abilities of U.S. counter-intelligence (CI) agencies to deter Soviets who ". . . will be expertly trained to look at what they're not supposed to see."¹²⁴ The FBI reportedly is reluctant to reassign agents due to its own funding and manpower problems, but the U.S. Army's Offensive Counter-Intelligence Operations Program is expected to assist the OSIA; even so, the Army unit's Technical Surveillance Counter-Measures Program (TSCM) has been consistently cut back over the years, with personnel reduced from one hundred and sixty to just thirty-two in the past six years. When the INF Treaty was signed there were a total of ten agents in the United States.¹²⁵

In describing U.S. CI units as undermanned and beset by many problems, it was reported that there are approximately one hundred CI officers now in the Central Intelligence Agency (CIA). In the 1970s director William Colby decentralized CI operations, literally spreading the people and files throughout the agency. With no separate career path, CI specialists must change positions to advance within the CIA, causing a former agent to say, "If you want substantive knowledge, you kill it stone dead by making people move around."¹²⁶

The subject of collateral intelligence gathering has had little public attention since mid-1988. It is as if the politicians who commanded the headlines earlier have ful-

filled their duties to their constituents anent Soviet spies and, after the Senate ratified the largely popular INF Treaty, feel it in their interest to move on to other newsworthy issues.

One news story, however, justified all the published concerns of Senator Hatch and his analyst. The story, in the 22 July 1988 Los Angeles Times, told how eight Soviet missile inspectors had been rejected by the United States because they were linked to past Soviet intelligence activities.¹²⁷ As with most incidents casting adverse light on the INF Treaty, this issue evaporated in a day or so, with no later articles or discussion in the media. However significant it is that the story was shortlived in the United States, it is notable there was no mention of the event in the Soviet press--none. There was, however, a reaction by the Soviets.

Some three and one-half weeks after the Times article, in the article "Illegal Souvenirs," Izvestia tells of three U.S. experts ordered to leave the Soviet Union after rock samples and tools from a Soviet atomic test site were found in crates being shipped to the United States. A White House spokesman stated, "We don't believe it was intelligence activity of any kind. . ."¹²⁸ While it appears there was not much intelligent activity taking place, the clumsy attempt by the rock collectors might have been sanctioned by their country of origin.

5.3 Verification Is Often In The Eye Of Its Beholder(s)

An agreement will succeed only if the parties to that agreement want it to succeed. To list all the recycled "new" verification features of the INF and somehow infer that these will assure compliance and, thus, peace in our time, is as illogical as it is dishonest.

The on-site occupation by the Allies of post-World War I Germany--the ultimate in intrusive on-site inspection--did not guarantee either compliance or peace.

6.0 Concluding Remarks

What history teaches us is that men never learned anything from it.¹²⁹

Although the Treaty Between the United States and the Soviet Union on the Elimination of Their Intermediate-Range and Shorter-Range Missiles only affect about five per cent of all nuclear weapons, much of the euphoria that followed the signing and ratification of the Treaty could be attributed to the "historic" verification provisions calling for intrusive on-site inspections. A review of past on-site agreements, such as the Treaty of Versailles and the Anglo-American Naval Treaty, however, might have caused backers of INF to choose another adjective to describe the pact. Unfortunately, the compliance records generated by ABM, SALT I, and SALT II are not free of blemishes, a result more of imprecise, poorly written agreements and a lack of effective sanctions than the total reliance on existing NTM.

Suggested reasons for embracing the INF Treaty, besides the often quoted western European fear of the Soviet SS-20s, include the political need for an agreement, the savings in wiping out entire categories of weapons, and the ever-popular "peace in our time." Despite apparent monetary savings, the costs and complexities involved in implementing the on-site inspection provisions have raised concerns, as have the burdens placed on deteriorating U.S. CI assets assigned to guard against Soviet collateral intelligence gathering. (While U.S. intelligence agencies relish opportunities for our collateral intelligence gathering, the episode of the Rock Collectors at Semipalatinsk might well temper their anticipation.)

While it may be worthwhile to express concerns, raise old arguments, and generally disparage the world's newest arms control measure, the INF Treaty has been signed and ratified, a fait accompli. What of the future?

The first order of business must be to rebuild U.S. CI capabilities, to assure that there are at least more than the ten TSCM agents mentioned in the U.S. News & World Report article cited earlier. We hope that the CIA will find ways to enhance its CI career path. While a critical issue, it will be very difficult to monitor through open sources.

My next suggestion is that rhetoric be replaced by constructive action by the current administration, and, while this calls for a dramatic break with the past, it is long

overdue in arms control. Formerly, more energy has been spent in publicly charging violations than was expended in developing verification capabilities and technologies, trying to work out issues in the SCC, or forming policy calling for arms control in the context of a comprehensive security policy.¹³⁰ It is one thing to persist adamantly in on-site verification (knowing the other side will never agree), and yet another to be unprepared when agreement is finally reached.

In a last reference to history, the concerns of Admiral John Godfrey of ". . .losing the skepticism which is part of vigilance. . ." ¹³¹ should be recalled when it is argued that concessions to arms control provisions should be made in the interests of opening a dialogue with the Soviet Union, and in the name of détente. Past efforts have gone nowhere, and there appears to be few instances where the Soviet Union has sacrificed its perceived national security in the interests of a peace initiative, a treaty, or détente.

Keeping Admiral Godfrey's words in mind, while responding to suggestions that arms control between the United States and the Soviet Union might be enhanced by helping General Secretary Gorbachev in his efforts at glasnost and perestroika, it should be clear that if Gorbachev succeeds, he might well be able to afford both guns and butter. His international duty will once again take priority. Should Gorbachev fail, it is assumed that he would be replaced by "a

man of the old Russia".¹³²

My introduction began with an Allied on-site inspector bidding goodbye to his counterpart in post-World War I Germany, acknowledging the failure of the verification efforts. The provisions of the Treaty of Versailles were probably touted as highly as those for the INF Treaty, and while most are convinced that man is ever so much wiser some eighty years later, only time will measure the success of the Treaty. While on-site inspection is an enhancement, it must be part of a well developed national security policy, one driven only peripherally by the political requirements of the moment.

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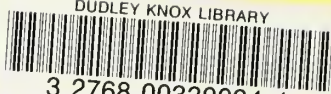
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